

TWX and Interlibrary Loans; One Library's Experience

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ABSTRACT

Vanderbilt Medical Center Library (VMCL) first installed TWX in 1966, thus joining the teletypewriter exchange (TWX) network. Eight years later (1974), VMCL removed its TWX terminal, mainly as an economy measure. It is the opinion of the author that the benefits derived from using TWX for interlibrary loan do not warrant the cost of the service. VMCL looks forward to a new approach.

A STATE of the art report on teletypewriters in libraries was compiled and published by Poole in 1966 [1], the same year that Vanderbilt Medical Center Library (VMCL) installed its teletype terminal. No medical libraries were included in the list of libraries that accompanied Poole's report, though this is not to say that there were no medical libraries with teletype* at that time; indeed there were, and more on this below. Poole's report, though useful, should not be regarded as comprehensive. At about the same time as Poole's report a paper by van der Wolk appeared, a paper that had some international significance [2]. Though they may have been stated earlier, or by others, van der Wolk's paper gave the classic attributes of teletype: "[It] combines the speed of the telephone with the authority of the printed word." And he went on to describe three fields for the application of teletype in libraries: routine correspondence, handling interlibrary loans, and the transmission of bibliographic data. No mention was made of the teletype terminal as a computer terminal; in medical library literature this had to wait for a description by McCarn in 1970 [3], although Bird had mentioned the possibility a year earlier [4].

The impetus for the installation of TWX in medical libraries in the United States came about in 1965 when three medical school libraries in North Carolina and two in Virginia formed a group, or network, that would be linked by TWX.

*Generally, the term "teletype" in this paper means TWX (teletypewriter exchange) but, depending on the context, it may have a broader connotation.

Later, the two medical school libraries in Kentucky became affiliated with the group. The history of the group, and much more, is described in Bird's paper, previously mentioned [4]. The National Library of Medicine (NLM) later joined the group, and its TWX policy and procedure was announced in October, 1966 [5]. (The Library of Congress (LC) had installed TWX fourteen years earlier, in August, 1952 [6]). At intervals thereafter, announcements appeared in the *Bulletin of the Medical Library Association* telling of the installation of TWX at other medical school libraries, and of the policies and procedures that were being followed by these libraries [7, 8, 9]. Bird reported that by November, 1968, there were seventy-two medical libraries on the TWX network [4], and the number has since grown. Braude and Holt attributed this primarily to stimulation of interlibrary cooperation by federal programs [10]. The 1974-75 *Directory of the Medical Library Association* records 114 institutional members in the United States as having TWX; the Medical Library Association (MLA) itself installed TWX in 1973 [11]. A decade earlier, Mack reported that, in the entire United States, only 64 libraries of all kinds had TWX [12].

A manual containing procedures for the use of TWX in interlibrary communication was issued in 1966 [13], and there have been subsequent revisions. It has come to be known as the "Bird Manual." The manual, despite the term "interlibrary communication" in its title, was essentially an interlibrary loan manual for libraries using TWX. Moreover, the manual went beyond the spelling out of conventions to be used in interlibrary loan (ILL) messages and replies sent by TWX; it also advocated certain new ILL policies. Following publication of the manual, these policies were adopted by a number of libraries. One of these policies was the cost-free copying and supplying of journal articles in lieu of lending the original. However, it might be recalled that other libraries had much earlier adopted this practice (cost-free copies in lieu of lending)—examples include NLM and Harvard Medical Library—and

these were the days before federal funding of this service at the regional level. The manual stressed a sense of urgency in the handling of interlibrary loan requests and brought about some welcome changes in attitude toward ILL activity. The manual was hidebound, however, in one major respect: its adherence to the General (later National) Interlibrary Loan Code of the American Library Association (ALA) and to the format of the ALA-ILL request form (the reason given was the need for standardization). Ironically, one assistant at VMCL later remarked that she preferred to send ILL requests by TWX because she was freed from the constraints of the ALA-ILL request form (use of TWX allowed more space). She also preferred the teletypewriter to a regular typewriter (probably because the typewriter she was using was an outdated model). Bird also reported that some of his library's assistants preferred to initiate TWX requests rather than use the old ALA-ILL request forms [4].

The great majority of medical school libraries installed TWX during the years 1965-70 (these were the five years following passage of the Medical Library Assistance Act of 1965). Federal funding and the desire of librarians to cooperate and integrate played an important part in the rapid extension of the TWX network for medical libraries.

INSTALLATION OF TWX AT VMCL

VMCL installed TWX in November, 1966, at about the same time that other medical school libraries in the Southeast were doing so. The speeding of interlibrary loan transactions was the prime reason given for its installation (an early VMCL policy statement, dated 20 December 1966, stated that all TWX requests would be given priority handling). However, the then librarian also set down other benefits, including its (TWX's) potential for use in conjunction with computer data banks. VMCL was later to use its TWX terminal for this purpose. McCarn, in the paper previously mentioned, describes this use of TWX [3]. A feature of VMCL's TWX installation was that of its being shared by VMCL's parent library organization: the JUL (the Joint University Libraries of Peabody College, Scarritt College, and Vanderbilt University). VMCL and the JUL's general library shared the installation, lease, and supply costs, from November, 1966, through August, 1968, when the general library obtained its own TWX terminal. Line charges were paid by the library that incurred the cost. During this time, outgoing

messages from the JUL general library were handled by an assistant who came from the general library to VMCL, as necessary, to type and transmit messages. Incoming messages destined for the general library were sent to that library by the JUL messenger.

From the date of its installation in 1966 until its removal in 1974, VMCL's TWX terminal was used routinely for interlibrary loan messages, and the conventions described in the "Bird Manual" [13] were followed. Following the inauguration of the Southeastern Regional Medical Library Program (SERMLP) in January, 1970, policies and procedures spelled out in the SERMLP Manual [14] were also adopted. However, the passage of time, plus changing circumstances and personnel, did bring about some changes (changes that were not always recognized or documented at the time). For the most part, if a library to which a VMCL interlibrary loan request was being sent had a TWX terminal, then the request was sent to that library by TWX. Similarly, if a requesting library had a TWX terminal, it sent its requests to VMCL by TWX.

In early 1972, when VMCL was given access to MEDLINE, the TWX terminal was adapted so that it could be used for MEDLINE searches (the "alternate use arrangement"). Although the terminal was adequate for this purpose, it was hardly a satisfactory arrangement. Disadvantages were: relatively high noise level, a size and weight which made it difficult to relocate, slow transmission speed, and competition for use. Operation of the TWX equipment as a MEDLINE terminal was not a good thing, and, later that year, a separate MEDLINE terminal was ordered and put into service (a Teleterm 1030 was selected).

OBSERVATIONS

The writer took over direction of VMCL in June, 1972, and he has no firsthand knowledge of VMCL's TWX operation before that date. However, following his arrival he made some observations. The first observation was that no longer did ILL requests coming in by TWX have special priority. Requests were now being dealt with in order of receipt, regardless of the method by which they arrived. There was no special staff alacrity in filling TWX requests (this practice may be more common than most librarians care to admit). A second observation was that more than half of all requests were still coming in by mail, for the simple reason that the requesting institutions did not have TWX. And a third observation was

that, of the requests that did arrive by TWX, many came so late in the afternoon that their processing had to be delayed until the next working day (which meant Monday if a transmission was received late on Friday afternoon). So much for incoming requests.

Outgoing requests were sent by TWX if the destination library also had TWX. Onward referrals were sent by TWX if the original requests came in by TWX, otherwise they were sent on by mail. Although VMCL takes its interlibrary borrowing responsibilities seriously, and has always acted promptly, it has never committed itself to having its assistants deal with interlibrary loan requests immediately following their submission by patrons. How many libraries do have such a commitment? All requests, with perhaps the occasional exception, are dealt with in rotation and given the appropriate treatment (verification, determination of location, etc.) before being sent out. The interval between submission of a request by a patron and transmission of that request by a library may be several hours or even days. This is something that often is not taken into account in studies of ILL activity, but it has an important bearing on the overall time required to satisfy a reader's request. Another time interval usually ignored in studies of this kind is the elapsed time between arrival of a requested item and the patron's being able to lay his eyes on it.

The writer also observed that the TWX terminal was the recipient of a variety of non-ILL messages, most of them not library-related and destined for other parts of the university. Another observation was that the location of the TWX terminal kept the interlibrary loan assistant away from the center of operations of the library, including the copying service, the catalog, and the indexes (the siting of the TWX terminal was determined by the need to have it in a place where its noise would not distract and annoy readers and staff).

The situation just described was tolerated during 1972/73. However, it became apparent that some belt-tightening would be necessary. During that year, SERMLP announced that "net lending" would go into effect. This action meant a reduction in the sum paid by SERMLP to VMCL for the loans and photocopies supplied by VMCL to other libraries. The reduction was an amount equal to the number of incoming loans and photocopies multiplied by the unit transaction fee paid by SERMLP to its resource libraries. VMCL decided to pass on the cost of making up this loss of

income to patrons who requested material on interlibrary loan. The number of interlibrary loan requests declined immediately, and the number filled for VMCL dropped from 1,387 in 1972/73 to 549 in 1973/74. It picked up only very slightly in 1974/75 (from 549 to 559). It is interesting to observe how even moderate charges for service reduce demand.

With a reduced number of requests to be sent out during 1973/74, the unit cost of sending an original request by TWX was bound to go up. The monthly rental has to be paid regardless of number of messages sent, and the monthly rental in 1973/74 was \$92/month (compared with \$61/month in 1966/67). It was estimated that the cost of sending an ILL request by TWX was close to \$3.00 (including labor). Braude in 1967-1969 established a unit cost of \$2.321 (compared with \$0.214 for an ILL request sent by mail in those days of six-cent first-class postage) [10]. Of course, the value of TWX lies as much in its ability to receive messages as in its ability to send them. But even here its usefulness has to be questioned. Previously mentioned is the observation that many incoming requests arrive by mail because the requesting libraries simply do not have TWX. On average, 70-75% of all requests received and filled by VMCL originate within the state of Tennessee, and only a handful of these requests come from institutions that have or use TWX facilities. Of the remaining requests (those from outside Tennessee), most come in by TWX, but between 1972/73 and 1973/74 the number of these out-of-state requests (received and filled) dropped by 9% (from 1,185 to 1,076).

REMOVAL OF TWX AND ITS EFFECTS

During 1973/74, the need for further economies became apparent, and the decision was taken to discontinue TWX service at the end of the fiscal year (30 June 1974). The order was given and the equipment was removed in early July, 1974. The removal was not without its humorous and portentous side: the workmen detailed to do the work went to the wrong library and proceeded to disconnect the terminal in the general library (they were stopped in time); thirteen months later the general library also discontinued its TWX service (August, 1975).

Shortly before the TWX terminal was removed, an announcement was mailed to the institutions mentioned below. The announcement gave the reason for the removal of TWX. It also stated that

if, after a period of time, VMCL's own patrons were seriously inconvenienced by lack of teletype, VMCL would consider restoring the service. Thirdly, the announcement stated that emergency requests would be accepted by telephone between 8:30 A.M. and 4:30 P.M. (Central Time), Monday through Friday. The announcement was distributed to all the regional medical libraries (including NLM) and to all the resource libraries and designated libraries of SERMLP. The announcement went out on 20 June 1974; no comments or objections were received.

Following removal of TWX in July, 1974, VMCL settled down to a life without TWX and the wait to find out what the reaction and the result would be. The interlibrary loan assistant, no longer tied to a desk adjacent to the TWX terminal, which had been housed in the basement, was immediately moved to the circulation desk, where she could be a lot more useful and effective in the performance of her primary and secondary duties (she was now closer to the journal collection, the copying machines, and the reference collection, and no longer did she have to come up from the basement to cover or relieve at the circulation desk when this was necessary). With the chattering TWX terminal gone from the basement, and following some modest changes there, a separate serials section office was created for the technical processes department. And there was an immediate monetary saving: no more TWX bills (there were of course increased postage costs, and the library had to buy more ALA-ILL forms). The library worried a little about losing its backup capability for the provision of MEDLINE service in the event of malfunctioning of its Teleterm terminal, but the fear has proved groundless. Another anxiety was that VMCL might become a pariah among medical libraries because of its action. So far, there has been no evidence of this.

A year went by. In planning for 1975/76, some brief consideration was given to the possibility of restoring TWX, but the matter was scarcely given a second thought. By this time, VMCL had been persuaded that use of teletype for interlibrary loan offered few advantages and that its relatively high cost outweighed these advantages.

During the summer of 1975, following one fiscal year without TWX, the writer conceived this paper. He asked the interlibrary loan assistant to ascertain data on how long it took to fill a request that was sent by TWX during 1973/74, the last year that TWX was in use at VMCL, and how long it took to fill a request that was sent by mail

during 1974/75, the first year following removal of TWX. The library decided to concern itself only with requests sent out in behalf of its patrons, i.e., the length of time between VMCL's TWX-ing or mailing a request and VMCL's receiving the requested item. Moreover, it concerned itself only with filled requests. Time elapsed was measured in days; no allowance was made for Saturdays or Sundays (there were no holidays). It was decided to sample two months' ILL activity in each of the two years. The months chosen for 1973/74 were October, 1973, and March, 1974, and for 1974/75, October, 1974, and March, 1975. These months were chosen because they are the full-length months (31 days) that are least affected by holidays and vacations. The date of sending a request determined whether it was to be sampled: thus, a request sent in February but filled (i.e., requested item received) in March was not sampled; on the other hand, a request sent in March but filled in April was sampled. No distinction was made between requests filled in the form of loans of original items and requests filled in the form of copies (the latter account for more than 75% of all filled requests). A distinction was at first made between those requests that were filled by the first library to which they were sent and those requests that were filled only after one or more onward referrals; however, in the final analysis, the distinction was ignored (requests that were filled after referral amounted to only 6.4% of the total). As expected, TWX requests were filled quicker than mail requests. But how much quicker?

The sample was composed of sixty-nine TWX requests (1973/74) and eighty-eight mail requests (1974/75). The greatest number (17.4%) of TWX requests were filled (i.e., requested items received) on the fifth day, and the greatest number of mail requests (25.0%) were filled on the seventh day (see Table 1). After five days, only 11.3% of mail requests had been filled (as against 53.5% by TWX), but two days later, the gap had narrowed (60.2% and 70.9% respectively), and by the eleventh day, 80% of all requests (TWX or mail) had been filled. By the fifteenth day, 90% of all requests had been filled (see Table 2). Requests taking longer than fifteen days to fill were considered "difficult," and it is felt that the method by which they were transmitted had no bearing on the speed with which they were filled. It is somewhat disconcerting to note that the requests that fell into the "difficult" category were all sent by mail—had they been put on the "back burner" because they were mail requests?

TWX AND INTERLIBRARY LOANS

TABLE 1
PERCENTAGE OF REQUESTS FILLED ON *n*TH DAY

<i>n</i>	TWX	Mail
1	4.3	0.0
2	8.7	0.0
3	10.1	4.5
4	13.0	3.4
5	17.4	3.4
6	8.7	23.9
7	8.7	25.0
8	5.8	4.5
9	1.5	2.3
10	1.5	5.7
11	5.8	10.3
12	8.7	2.3
13	0.0	1.1
14	4.3	3.4
15+	1.5	10.2

But to answer the question (how much quicker?): overall time for 90% of requests (from transmission of request to receipt of requested item) varied from one day to two weeks, with 50% of the TWX requests filled by the fifth day, and 50% of the mail requests somewhere between the sixth and seventh days. To a patron who has waited five days for a desired item that was requested by TWX, is the small extra wait for an item requested by mail a serious inconvenience? And is it worth the expense and effort involved in sending requests by TWX? As previously men-

TABLE 2
CUMULATIVE PERCENTAGE OF REQUESTS FILLED BY
*n*TH DAY

<i>n</i>	TWX	Mail
1	4.3	0.0
2	13.0	0.0
3	23.1	4.5
4	36.1	7.9
5	53.5	11.3
6	62.2	35.2
7	70.9	60.2
8	76.7	64.7
9	78.2	67.0
10	79.7	72.7
11	85.5	83.0
12	94.2	85.3
13	94.2	86.4
14	98.5	89.8
15	98.5	92.1
16+	100.0	100.0

tioned, the amount of time between a reader's submitting his request in the first place and his actually receiving the requested item in his hands may involve a few more days than the overall times referred to in Tables 1 and 2.

The interlibrary loan assistant was asked whether at any time during 1974/75 (the first year without TWX) she received any emergency requests by telephone (the library had offered to accept such requests following disconnection of TWX). She does not recall receiving any such requests. The library did observe between 1973/74 and 1974/75 a 17% reduction in the number of requests that it received and filled (from 2,734 in 1973/74 to 2,260 in 1974/75). It is possible that some TWX-using requesting libraries decided to send their requests elsewhere when they found that they could no longer communicate with VMCL by TWX or because they felt they would receive slower service. Other factors (including various restrictions and the imposition of charges) also played their part in the reduction.

DISCUSSION

At the beginning of this paper, mention was made of the three fields for the application of teletype in libraries, as identified by van der Wolk: routine correspondence, handling interlibrary loans, and the transmission of bibliographic data. While some libraries may have used teletype for correspondence, it is doubtful whether any of them used it routinely. For one thing it is too expensive, and for another, too awkward. If it is used for correspondence, it is used more often than not for the sending of a telegram-type message, often to more than one library. And if urgency is involved, it is quite likely that the telephone would be used, with a follow-up letter if necessary. The transmission of bibliographic data (if by this one means literature analysis and retrieval systems, on-line cataloging data, instant holdings information, etc.) was taken over some time ago by faster and more sophisticated systems. This leaves only interlibrary loan requests as the reason for the retention of TWX in most libraries. Here there has not been much development beyond an increase in the number of libraries on the TWX network in the ten years that medical libraries have been using TWX (1965-1975). On reflection, TWX really did little more than displace the postman in the transmission of requests, speed things up a little, and add greatly to the cost of interlibrary loan

service. The basics remained the same. And the postman continued to bring the desired items, regardless of the method by which they were requested. The price of postal services has risen, to be sure, but so have many other library expenses, including TWX.

The situation is changing. In 1975, the Center for Research Libraries (CRL) announced its Journals Access Service [15]; a representative from NLM spoke at a meeting of the SERMLP Advisory Committee in October, 1975, and described NLM's experimental DOCLINE (Document Delivery On-Line) system [16]; and both institutions (CRL and NLM) are innovating services in conjunction with the British Library (Lending Division). The Ohio College Library Center (OCLC) is also developing an on-line interlibrary loan system. Doubtless other refinements in document delivery service are in the offing, and a departure from the long traditions of interlibrary loan is likely. VMCL will watch these developments closely and participate in them if it is deemed beneficial and financially feasible. But for the moment it will use the money saved by nonuse of TWX for interlibrary loans in the improvement of other services, or for collections development.

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